Transmitter	
Moduliaion mode(Wide/Narrow band)	16K ¢ F3E/11K ¢ F3E
Maximum frequency deviation(Wide/Narrow band)	≤ 5kHz/≤ 2.5kHz
Adjacent Channel Power(Wide/Narrow band)	≥70dB ≥62dB
Spurious outputpower	≤7.5uW
Pre-emphasis characterstic	6dB/Increase per octave
Transmitt current	≤2.5A
CTCSS/DCS(Wide/Narrow)	0.75kHz ±0.1kHz, 0.4kHz ±0.1kHz
Modulation sensitivity	8–12mV
Audio distortion	≤5%
Receiver	
RF sensitivity	≤–0.2μV ≤–0.25μV
Audio frequency power	500mW/10%
Audio distortion	≤5%
Obstruct	≥85dB
Intermodulation	≥ 65dB ≥60dB
Selectivity	≥70dB ≥60dB
Spurious rejection	≥ 65dB

FALCON Ⅲ SERIES

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Rev.D

MULTIFUNCTIONAL HANDHELD RADIO(UV) QUICK REFERENCE GUIDE

AN/PRC-152A(UV)

TCA® TACTICALL

TCA Tactical Communcition Automtion & System.

MADE IN CHINA (BD7NWK)

Spcifications

Spcifications	
Frequency range	VHF 136–174MHz UHF 400–480MHz
Frequency sensitivity	± 2.5ppm
Rated voltage	7.4V DC ± 20%
Memory channel	128 channel
Allocation	Pupinization antenna
Antenna impedance	50
Working dimension	Same frequency single working or different frequency singie working
Dimension	105*56*35MM (No allocation)

Transmit DTMF Code Manually

This transceiver can transmit DTMF code manually, when this transceiver is transmitting, input 0–9ABCD*# on the keypad, then the corresponding codes will be transmitted. Keyboard correspond DTMF code list as follows,

keyboard					DTMF code			
1	2	3	CLR	→	1	2	3	A
4	5	6	ENT		4	5	6	B
7	8	9	+		7	8	9	C
0	<	>	PRE –		0	*	#	D

Transmit Stored DTMF Code

Press "DTMF / MONI" button to enter DTMF code groups, press【+】/【–】to select DTMF code groups, press PTT to transmit.

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Friendly Reminder

Purchase, use this device is belong to use the transceiver station {station} behavior. Must be handled according to the use of approval procedures, to receive a transceiver license. In the use of the prepared process, should be in accordance with the transceiver license to be the project work. Unauthorized use of the transceiver station {station}, the interference of radio services, not according to the approved project work and other violations of transceiver regulations, by the radio management transceiver to give administrative penalties. Serious incompetence may also be punishable by imprisonment, criminal detention or control for a term of imprisonment of up to three years under article 288 of the Penal Code or article 28 of the Public Security Administration Punishment Act, and concurrently punishable by a fine or a fine of the administrative penalty.

CONTENT

Main Function Features 1
Warning 2
Checking Equipment 3
Battery Information 4
Maintenance and cleaning 6
Accessory Installation 7
Battery case 18650 battery installed 8
Getting Acquainted 9
Display Icon Instruction 11
Shortcut Key Operation Instructions 14
Basic Function Description 16
Menu Funtion Operation Instrunction 19
How To Use Repeater 22
Dual PTT operation instruction 25
Transmit DTMF Code Manually 26
Technical Specification 27

Dual PTT operation instruction

The left side of the radio has the PTT and MONI key

Select menu No. 38 KEYSET key, confirm to enter (MONI/PTT), and set the PTT function, then the MONI key will be the transmitting key of the down frequency, and the PTT key be the transmitting key of the up frequency.

If want to single call A member in team 1, then transmit 121 code.Only member A can hear this call, otherscan not hear. If transmit 12* code, then all members in team1 can hear this call, but team 2 and team 3 cannot hear. If transmit 1* * , then all 3 teams members can hear the call.

Caller ID

If transmitting code while transmitting caller ID, then main transceiver's call ID will be displayedon receiver's transceiver.(Example) If A member in team 1 call B member, member A transmits122*121, then member B transceiver will display member A's ID 121, this is Caller ID.

Remote Stun / Remote Stun Wakeup

Transmit remote stun codelsuch as 1212),transmit 1212code then that transceiver can be onlyreceiving (That is, remote control others).To wakeup that transceiver, only need to transmitremote stun code 1212+# code.

Remote Kill/ Remote Kill Wakeup

Transmit remote kill code(such as1234), transmit 1234 code then that transceiver can not transmitting and receiving.LCD display will indicate "All Lock".To wakeup that transceiver, onlyneed to transmit remote kill code 1234+#code.

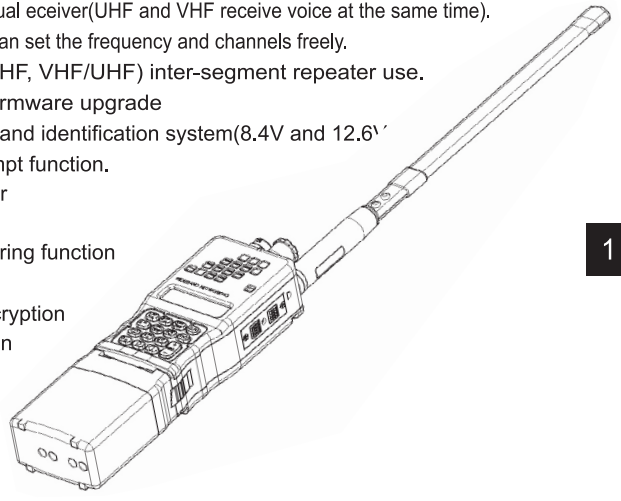
How to use GPS

TCA/PRC152A-GPS version operation:
Menu-No. 33 GPS switch(OFF/ON)
Menu-No. 34 GPS-E-N , the GPS latitude , longitude data and read time
Menu-No. 35 GPS-LIST, the GPS location list ,it can receives 20 groups information.
Menu-No.36 TX-GPS, transmitting the radio GPS parameter
Menu-No.37 RX-GPS,receiving the GPS parameter from other radios

GPS function operation instruction:
1.In Standby mode press the ENT key to enter main menu, and press + PRE − key to select NO. 33 GPS switch function, then press ENT key to confirm choose “ON”.

Turn on the GPS , the “G” icon is displayed on the upper left corner of the radio LCD and is constantly flashing to search for the satellite positioning signal. When the positioning signal is received from the satellite, the “G” icon stops flashing and enters the GPS positioning working state and continuously updates the parameters in real time.
Remark: The radio should use the GPS positioning function in an open and unobstructed environment

Main Function Features



★ Dual Band, Dual Display, Dual Mode, Dual eceiver(UHF and VHF receive voice at the same time). In frequency mode and channel mode can set the frequency and channels freely.
★ Repeater function, support(UHF/VHF, VHF/UHF) inter-segment repeater use.
★ Support system software update firmware upgrade
★ Battery voltage automatic detection and identification system(8.4V and 12.6V)
★ Chinese and English operation prompt function.
★ Support TCA-KDU remot e controller
★ Support GPS (GPS version)
★ One-button automatic frequency pairing function (frequency and CTCSS/DCS)
★ 7 groups of CT scrambled voice encryption
★ Channel hopping transceiver function
★ MD dynamic microphone selection
★ FM radio reception
★ AM aviation band
★ VOX PTT
★ SPK internal horn control
★ KEYSET dual PTT transmit (can set two PTT to transmit the two frequency)
★ Radio power can be set high/middle/low, the highest output (10-15W) to achieve long distance signal transmission

Warning

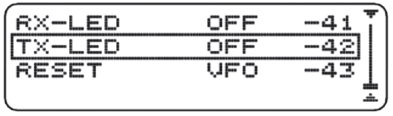
- Please make sure the transceiver must comply with local government regulations, improper use will violate the law, and subject to sanctions or even jail.
- The repair job of this transceiver is in the charge of professionals & technical, self-disassembly is prohibited.
- To avoid problems caused by electromagnetic interference or electromagnetic compatibility, please turn off the transceiver during see the mark "please close the transceiver", such as in the hospitals and health care places and when you are on board.
- In a car with an airbag, do not place the transceiver in the area where the airbag is likely to be involved.
- Please do not communicate or charge this transceiver in flammable, explosive and area which transceiver communication is prohibited(such as oil station, gas station, airport etc.)
- Please do not continue to launch too long time, the transceiver may be hot and burned, or even damage the transceiver.
- Please do not use the antenna that has damaged, and the damaged antenna may cause slight burns.
- Please make sure this transceiver avoids the sunshine, and avoids to put it near any heating device.
- Please make sure this transceiver avoids any dusty, humid and water splashed place, and also avoids to put it on unstable surface.
- If you are hold the transceiver on your body, please make sure that the transceiver is at least 5 cm from the body when it is launched.
- If any discord or smoke is found, please turn off the power and contact your nearest authorized dealer.

1. Menu -No. 26 RPT-AL , Repeater transmitting delay setting (0-9 seconds)
After receiving the signal, the radio will delay for a period of time before performing differential transmission to ensure that the signal can be directly used for direct frequency communication within the effective range.

2. Menu -No. 27 RPT-SPK, In the repeater working mode, the repeater horn loudspeaker settings(OFF/ON).
In the repeater working mode, when the setting is ‘ON’ and the differential signal is received, the speaker can monitor the sound. When the setting is ‘OFF’, the speaker does not emit sound when the differential signal is received, and the intercom is in mute state.

3. Menu -No. 28 RPT-PTT, in the repeater working mode, can choose the PTT transmitting to be OFF or ON.
When in repeater working mode, choose ‘ON’, the radio can still transmitting the signal by the up and down frequency.

4. Menu -No. 29 RPT-MD, repeater one-way/two- way selection under the repeater working mode(1/2).
In repeater working mode, select ‘1’ then the repeater will working by the setting RX receiving frequency and the setting TX transmitting frequency.
In repeater working mode, select ‘2’ then the repeater will not working by the setting RX and TX, but working by the up and down frequency . When either the up or down frequency receiving signals then the radio will use the other frequency to transmit signal.



■ RX-LED---Switch of background light for receiving signal (OFF/ON)
■ TX-LED---Switch of background light for transmitting signal (OFF/ON)
■ RESET---Restore factory operation (VFO setting the parameter clearing / FULL parameter and channel clearing)
Remark: restore password 0000 , Please proceed it with caution.

How To Use Repeater

This transceiver has own repeater function without working with other repeaters. the methods are as follows:

1.In standby mode, press ENT key to enter main menu , and press PRE key to select No.25 RELAY, press ENT to confirm selection （OFF/ON）, press PRE key to choose “ON”, then press ENT key to confirm.

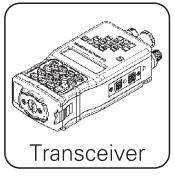
Remark: RX receiving frequency and TX transmitting frequency can only be set using frequency values of different frequency bands.

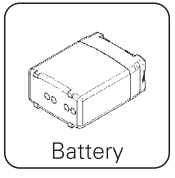
Repeater auxiliary function options description :

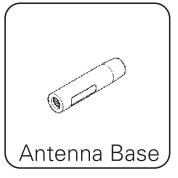
Checking Equipment

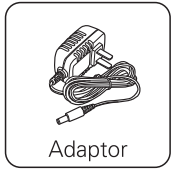
Please check your product packing if any damage. Carefully unpack the transceiver, we recommend that you identify the items in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact you dealer.

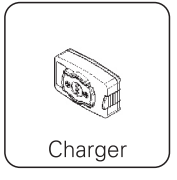
Standard accessories

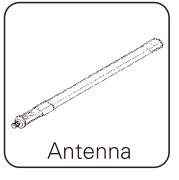

Transceiver


Battery


Antenna Base


Adaptor


Charger


Antenna

Battery information

Attention of the charger details

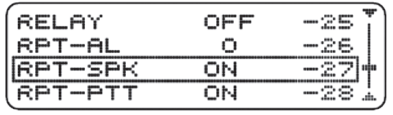
The battery case do not installed batteries when delivery transceiver from factory, please charge the new install batteries or long time no using charging battery. Charging/ Discharging circulation in 2 or 3 times so that the capacity of battery reached at the best state. When discover the battery in low power, it need to charge or replace battery.

Type of Applicable Battery

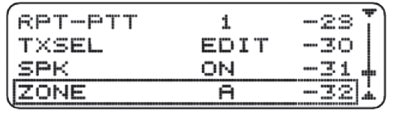
Please use the assigned 18650 battery to charge, It maybe happen explosion or cause body hurt if using others battery.

Attention:

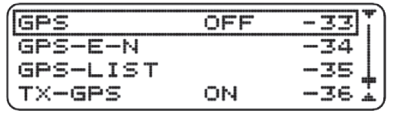
1.Please do not short out the battery terminal or discard the battery into the fire.
2.The environment temperature should be around 0℃ between 40℃ when on charging. When outside of the range charging , it maybe be influenced the life of battery.
3.During charging ,please remove the battery from transceiver , install charger and plug the power transformer to charge.
4.During charging ,please do not insert electronic power or batter to avoid interfering with electrical procedures.
5.Even though all operating is correct for charging, but the using time is reduce, which means the life of batter is used up, please replace the new battery.
6.If the batter in full charging, please do not take the batter to re-charge again, or the life of batter will be shorten or damaged.



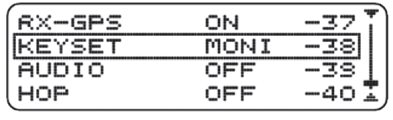
- RELAY---Repeater switch (OFF/ON)
- RPT-AL---Repeater transmitting delay (0/1/2/3/4/5/6/7/8/9) seconds
- RPT-SPK---Repeater speaker switch (OFF/ON)
- RPT-PTT---Repeater PTT switch (OFF/ON)



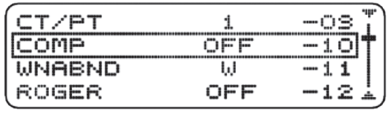
- RPT-MD---Repeater one-way/two- way selection (1/2)
- TXSEL--- Priority channel transmitting set (EDIT/BUSY)
- SPK---Radio speaker switch (OFF/ON)
- ZONE---Channel group partition selection(1/2/3/4/5/6/7/8)



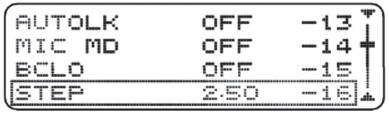
- GPS-GPS switch (OFF/ON)
- GPS-E-N---the GPS latitude , longitude data and read time
- GPS-LIST---The GPS parameter (group 1-20)
- TX-GPS ---GPS parameter transmitting



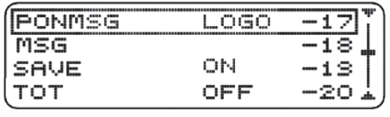
- RX-GPS---Receiving the GPS parameter from other radios
- KEYSET---Dual ptt setting by side key (MONI/PTT)
- AUDIO---Langue indication choice (CN/EN/OFF)
- HOP---The frequency hopping switch (OFF/ON)



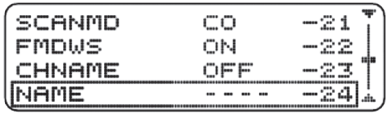
- CT/PT---Scrambled voice encryption(OFF/1/2/3/4/5/6/7/8)
- COMP---Voice compacting switch (OFF/ON)
- WNBAND---Wide band and narrow band setting (W/N)
- ROGER---TX ends prompt voice switch(OFF/ON)



- AUTOLK---Auto key lock (AUTO/OFF)
- MIC MD---Moving coil microphone(OFF/ON)
- BCLO---Busy channel lock out(OFF/ON)
- STEP---Step frequency (100/50.0/25.0/12.5/10.0/6.25/ 5.00/2.50)



- PONMSG---Boot Display Mode (LOGO/DC/MSG)
- MSG ---Boot Name Edit 8 Digits (——)
- SAVE---Power saving mode (OFF/ON)
- TOT---Time out timer(OFF/30/60/90/120/150/180/210/ 240/270)



- SCANMD---Scanning mode(TO/CO/SE)
- FMDWS---Monitoring mode (OFF/ON)
- CHANME---Channel name (OFF/ON)
- NAME---Channel name display edit(8 characters)

7.When the batter or transceiver is wet, please do not charge. Before charging, please use the cloth wipe dry it to avoid damage.

Warning:

When the conductive metal, such as jewelry, keys or decorative chains, contacts the electrode, all batteries may cause product damage on the products or human body. These conductive metals may cause short circuits and produce large amounts of heat. So when handling any battery, should be very careful, especially when it is placed in a container of clothing, bags or other metal objects.

Charging Operation

When Installed battery, If the transceiver battery indicates BAT VULOS , Indicates that the battery is no power. Please charging it. Please use the charging stick specified by our company to charge the battery, the charger's indicator will shows the charge status.

LED Indicate	Status
Red light	Charging
Green light	Full charge

Charging Please follow the steps as below：

1. Plug the power adapter into the AC outlet.
2. Plug the DC plug on the power adapter into the DC jack located on the side of the cradle.

3. Plug the battery case connect to battery swivel card then begin charging.
4. Make sure the battery is in good contact with the battery clip, when indicator turn into red it start charging .
5. Charging about 3 hours or more, when the indicator light turns green, the charge is complete. At this point you can remove the battery and put it into the transceiver to use.

Note: The charging connector base and the inside of the battery case have a charge protection circuit, it will automatically stop charge when the charging is completed.

Maintenance and cleaning

- Please do not lift antenna or external microphone directly.
- Wipe the dust on the walkie talkie with a lint free cloth and prevent dirt from touching.
- When the walkie talkie when not in use, please put the cap on the headset jack.
- After long-term use of the walkie talkie, buttons, control buttons and housing easily become dirty, you can use neutral detergent (do not use strong corrosive chemicals) and warm cloth for cleaning.

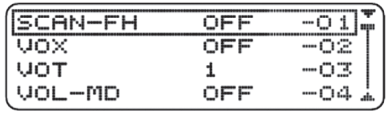
-clears all parameters in the menu and channels.

2. Restore factory operation, press ENT key to enter the main menu, press PRE key to select No. 43 RESET, press ENT key to confirm to enter the operation, press PRE key to select VFO/FULL, and then press ENT to confirm to enter the password input-------(restore password 0000) clear and recovery complete.

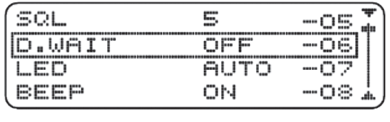
Menu Funtion Operation Instrunction

Under standby mode, press ENT to enter Menu, press PRE to search the required functions, press ENT to comfirm operation, press PRE to select the function, press ENT to comfirm.

Menu Functions Instruction



- SCAN-FH---Scanning and frequency hopping function
- VOX---PTT voice control switch (OFF/1/2/3/4/5)
- VOT---PTT voice control time (OFF/1/2/3/4/5)
- VOL-MD---main/secondary (A/B) frequency voice distinction (OFF/MAIN/SUB)



- SQL---Squelch level setting (0/1/2/3/4/5/6/7/8/9)
- D.WAIT---Single/dual standby select (OFF/ON)
- LED---background light control(AUTO/OFF/ON)
- BEEP---Prompt voice switch (OFF/ON)

3. Select the district to store, press ENT key to enter the Menu, press PRE key to select the no. 32 zone, then press ENT key to confirm select→ press key to select the district you need (A,B,C,D,E,F,G,H).

FM Radio Channel Storage

1. In the FM radio function mode, totally can store 25 FM channels.
2. In FM Radio full frequency mode, input FM Radio frequency or scan the FM Radio frequency that you want to store→Press ENT button 2 seconds to enter FM Radio storage function,→Press PRE buttons to choose the FM Radio channel number that you want to store,→Press ENT button to confirm.
3. FM Radio full frequency mode and channel mode can be switched by long press 0 key.

External devices introduction

1. The port of the radio external device is U-283-2 6 pin radio connector
2. Interface U-283-2 6 pin internal output definition adopts military standard A-ground, B-audio, C-PTT, D-mic signal, E-data transmission, F-5VDC.

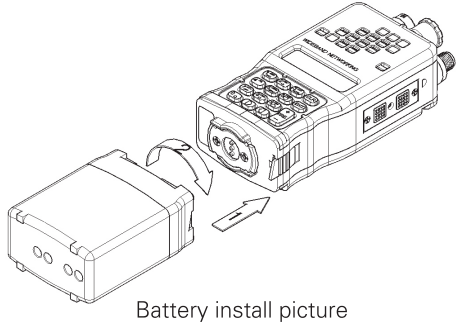
Restore factory settings operation

Factory reset is divided into two clearing methods: VFO-clears the settings in the menu, FULL-

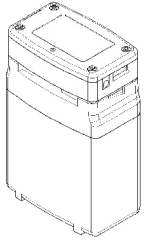
Accessory Installation

Install, remove the battery pack / battery charging connection

Align the two grooves of the battery with the corresponding rails on the bottom of the transceiver, make sure the battery is in full contact with the aluminum case and parallel. Turn the battery along the rear aluminum case rail of the transceiver to the battery lock button on the transceiver base. To remove the battery, make sure the transceiver is power off and push the battery lock up. Make sure the transceiver body and the battery are released, and pull down the battery from the transceiver.



Battery install picture

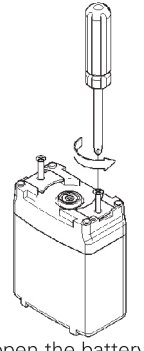


Battery charging picture

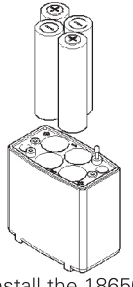
Install Battery Box 18650 battery Cell

Use a Phillips screw driver to loose the two countersunk head screws on both sides of the top of the battery counterclockwise and open the battery cover. Install the four 18650 battery as the direction of the "+, -" mark in the battery cover, and then restart close the battery cover, clockwise on both sides of the screw evenly tightening force.

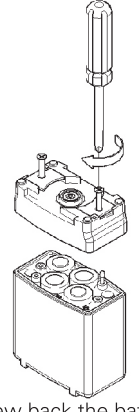
Attention: When installing the 18650 battery, please make sure to place the +, - pole direction of the battery correctly, otherwise it will affect or burn the protection circuit which is inner the battery compartment.



open the battery upper cover



Install the 18650 battery correctly



Screw back the battery upper cover tightly

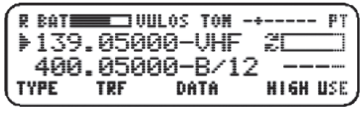
Function shortcut operation instructions

1. Enter frequency mode and channel mode: Press and hold the 0 key in standby mode to enter channel mode →full frequency mode once in a cycle.
2. FM radio mode: Long press 3 MODE key to enter MODA mode, press ▶ to enter FM mode, and input the FM channel to listen to, or long press 6 key or 9 key to search the FM channels. When the FM signal is scanned, it will stop playing on this channel. Press the 3 MODE key again to turn off the FM.
3. Enter the AM aviation frequency band: long press the 3 MODE button to enter the MODA mode; press ◀ to enter AM mode, and input the aviation frequency to listen to the information .
4. Press the ▲▼ key to choose the main/ secondary channels, the screen show " ▲ " is the main channel.

Radio Channel Storage

1. The radio have 8 district(A,B,C,D,E,F,G,H) in channel mode, every district can store 16 channels, totally 128 channels.
2. In FM radio full frequency mode, input the frequency , CTCSS/DCS and other parameter information you need by the keypad →long press ENT key for 2 seconds to enter channels storage to display the channels number→ press + PRE − to select the channel number that you want to store→press ENT to confirm.

7. Frequency mode/channel mode switching 0



■ Press 0 key for about 2 seconds to switch the frequency mode and channels mode.

■ Frequency mode. Press PRE key to increase/ decease the frequency value or input the value by the keypad.

■ Channel mode, press PRE to search the stored channels

Basic Function Description

Open / Close Power

Clockwise rotation Volume/Switch locator, open the power wil hear the"Click' sound,Potentiometer counter clockwise until hear the"Click" is close the power.

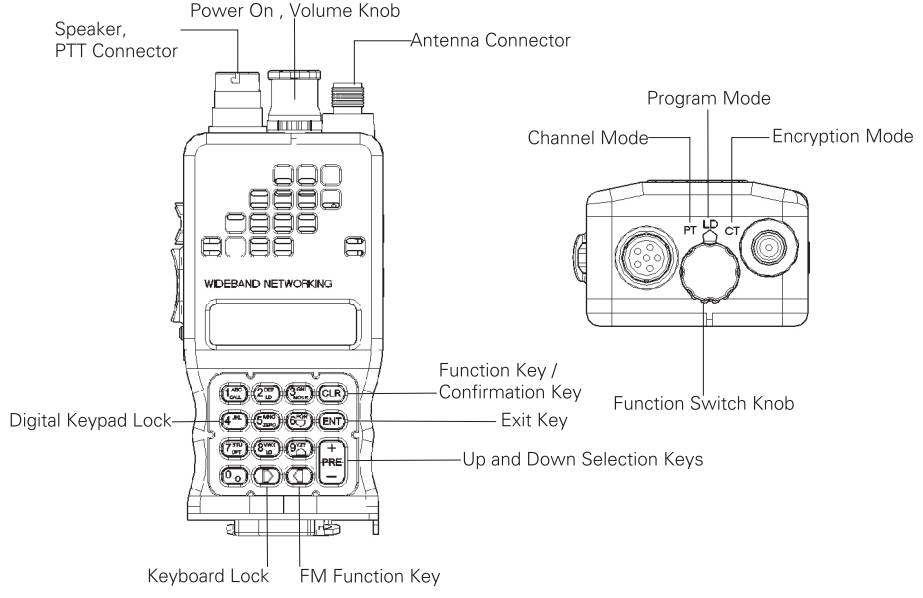
Adjust the Volume

Adjusting the volume Potentiometer clockwise, will increase volume, adjusting it by counterclock-wise, will reduce volume.

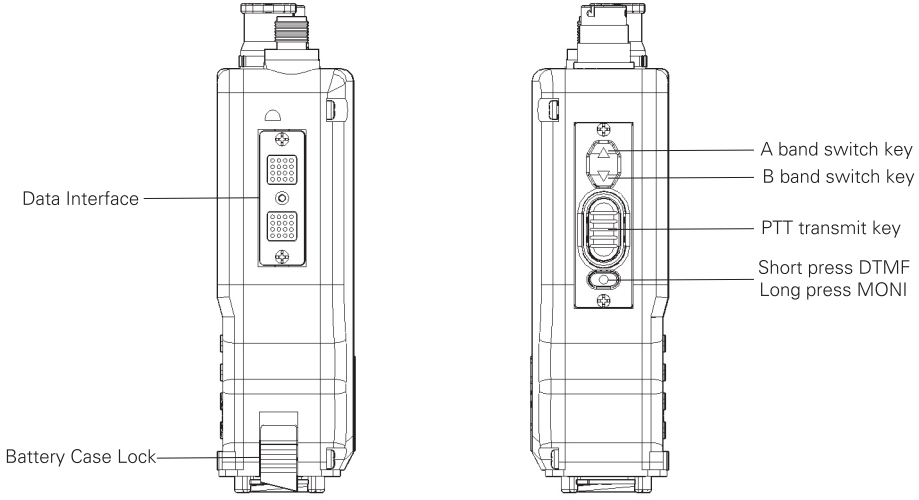
Operating instructions for band switching

Band Switch Turn into 3 parts, function as follows,
First Part PT: Channel Mode
Second Part LD: Programming Mode, when radio do program by computer, band switch dial on this part.
Third Part CT: Voice Encryption, when radio dial this, the Voice Encryption is open.

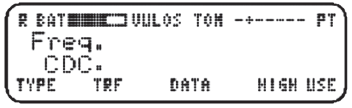
Familiar with Transceiver



Two Sides of Transceiver



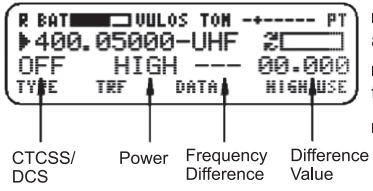
4. ZERO Fast frequency synchronization status 5 MNO ZERO



■ Press 5 MNO ZERO for about 2 seconds to enter automatically frequency pairing status

■ Put the antenna of the walkie-talkie that needs to be pairing close to the antenna of the host. (distance 5cm-10cm), press PTT and wait for the corresponding readout parameters.

5. OPT Quick parameter adjustment status 7 STU OPT

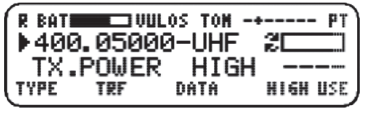


■ Press 7 STU OPT key for about 2 seconds, then enter parameter adjustment status

■ Press ◀ ▶ to adjust the parameter ,then press ENT to confirm.

■ Press + PRE − to adjust the required parameter value.

6. PGM Quick power adjustment status 8 VWX PGM

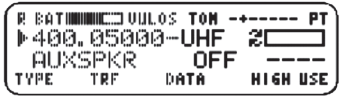


■ Press 2 DEF LT key for 2 seconds, then enter power adjustment status

■ Press + PRE − to select Low/Mid/High power, then press ENT to confirm.

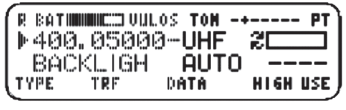
Shortcut Key Operation Instructions

1. CALL Horn status control (1 ABC CALL)



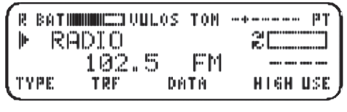
- press (1 ABC CALL) key for 2 seconds, then enter adjustment state
- Press (+ PRE −) to adjust OFF/ON loudspeaker, press (CLR) to confirm exit

2. LT Display backlight control (2 DEF LT)

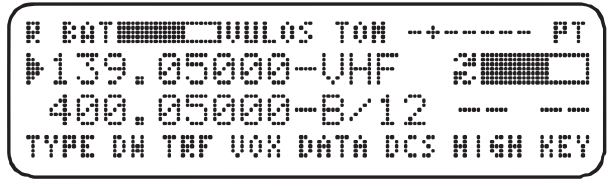


- Press (2 DEF LT) for about 2 seconds, then enter display backlight adjustment status
- Press (+ PRE −) to select AUTO/OFF/ON backlight, then press (CLR) to confirm exit.

3. MODE Radio FM/AM status (3 CHI MODE)



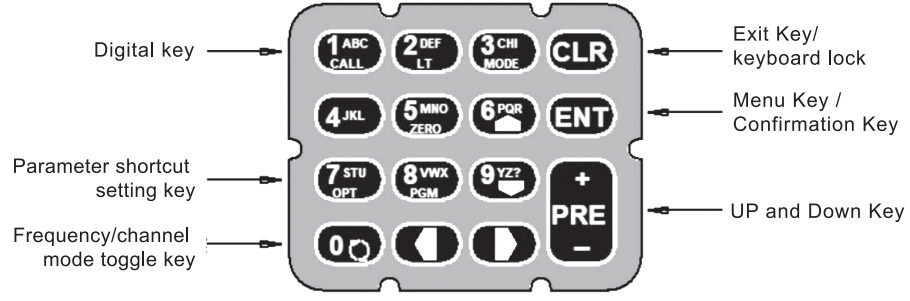
- Press (3 CHI MODE) key for about 2 seconds, then enter radio FM/AM status
- Press (◀) (▶) to select AM frequency /FM frequency to receive
- Press (6 PQR) (9 YZ?) key to enter the automatic up-scan and down-scan FM signal



Display Icon Instruction

Icon	Corresponding Meaning
VHF	UHF VHF UHF frequency, VHF frequency (frequency mode status)
B/12	A-G partition indication, 1-16 channel indication (channel mode status)
R	R G R standard working mode/ GPS on working mode
BAT	8.4V/12.6V battery power automatically prompt
MOI	MOI TOM MOI radio mode / TOM external headset device
-+------	Seven groups of encryption setting status indicator
PT	PT CT PT ordinary transceiver/ CT scramble encrypted transceiver
▶	Upper and lower paragraph switching theme indicator
	Receive/transmit signal field strength display mode

Icon	Corresponding Meaning
TYPE	Type sequence indication
DW	Dynamic microphone indication
TRF	TRF TDR TDR single standby function, TRF dual standby function
VOX	VOX PTT transmit function
DATA	DATA single button normal transmit status
DCS	DCS CTC CTC transmit and receive analog sub-audio / DCS transmit and receive digital sub-audio
HIGH	LOW MID HIGH Low / Middle / High transmit power
KEY	KEY USE Key Keypad lock status / USE Keypad use status
---- ----	---- U/V ---- ---- L/D ---- F/D frequency hopping transmission, U/V transmit though repeater function



1 ABC CALL — Speaker control
2 DEF LT — Backlight control
3 CHI MODE — Radio
4 JKL — Digital key
5 MNO ZERO — Frequency tuning function
6 PQR — UP Key
7 STU OPT — Parameter settings
8 VWX PGM — Power settings
9 YZ? — Down Key
0 — Frequency/ channel toggle key
◀ — Left key
▶ — Right key
CLR — Exit Key
ENT — Menu/ Confirm Ley
PRE — +-key